Today’s DE Agenda

1. Deliverables: Our Expectations
2. Executive Summary Guidelines
3. Example Developmental Opportunities
4. Guests & Brainstorming
Guests

- Eleonoria Badilla-Saxe, Education/LINCOS
- Ian Eslick, SiliconSpice
- Tim Prestero, Design-that-Matters/Kinkajou
- Sissi Liu, Kenyan Agroforestry / ecoventures
- Damien Balsan, Way/MobileBanco
- Nathan Eagle, Cash
- Owen Johnson, MakingProgress, microphilanthropy; InterDimensions
- Sanith Wijesinghe, $50K biomed, OCW
- Yael Maguire, FabLab & ThinkCycle
DE Deliverables

• **Weekly** weblinks via email…
• Business Plan Executive Summary
  – **DUE**: November 19, 2003
  – 1,200 words; 3 pages; $50K format
• Form Teams to do this!
  – Within class or beyond
Executive Summaries

• Rules & Guidelines at http://50k.mit.edu

• Fairly standard What, Why, How, Who, Who Else questions

• Systematically hook the reader in with compelling elevator pitch & more
Identifying Worthy Opportunities

• Problem side
• Solution side
• Big categories & specific ideas

• Pick *something* and begin exploring, iteration will naturally focus you.
Macro Categories

The 1G Challenge

- Basic Needs
- Health
- Catastrophe Mitigation
- Shelter
- Farming
- Culture
- Transportation
- Distributed Power
- Information & Communication
- Education
- Business Models
- Finance
- ...
Innovation Opportunity / Idea Sources

- Design-that-Matters http://www.designtatmatters.org
- HalfBakery http://www.halfbakery.com/
- Technology Transfer Database http://www.sristi.org/technologytransfer.html
- ThinkCycle http://www.thinkcycle.org
- GIAN http://www.gian.org
- http://journeytoforever.org/at_link.html
- Innovation Foundation http://www.nifindia.org/
  …many more!
Specific Ideas & Opportunities
Health: Low Cost Test & Diagnostics

- Disease
- Contamination
- Analogous to pH or Litmus paper
- Telediagnostics
- “Penny Diagnostics”

http://www.media.mit.edu/nanoscale/research/sensors.html
http://web.media.mit.edu/~jasont/dist/tabletopchem/
Health: Low Cost Therapeutics

- Wound care
- Simple treatments
- Key devices
- E.g. Cholera Treatment
  - Annually 5-7 million cases, 100,000 deaths worldwide

http://www.thinkcycle.org
Health: Clean Water

- Ashok Gadgil’s UV disinfection system by *Water Health International*
- Wastewater treatment filter
- Desalination

http://www.world-wide-water.com/Desal.html
http://web.mit.edu/invent/www/search.html
Catastrophe Mitigation: Imaging & Early Warnings

- Remote imaging
- Weather forecasts for farmers and fishermen and low-land dwellers

Catastrophe Mitigation:
Landmine Detection

• Traditional methods
  http://sun16.cecs.missouri.edu/landmine/
• Chemo-bio tracing

http://www.esd.ornl.gov/research/burlage_fig1.html
Shelter: Ecofriendly Structures

- Building Efficiency in China
  http://loohooloo.mit.edu/plan/plann_issues/54/china/index.html

- Sanitary facilities & Plumbing

http://www.thinkcycle.org

http://www.rmi.org/
Transportation: Farming Moto-extensions

- Enfield Bullet motorcycle appendage
- Generalizable...

http://www.sristi.org/santi_tech.html

http://www.sristi.org/motorcycle.html
Culture: Craftscaling

- Leveraging local craftsmen into a global market
- E.g. Craftcenter
  http://www.craftscenter.org/
- E.g. Global Crafts
  http://www.globalcrafts.co.uk/
  “Ethical e-Commerce”
Culture: Leveraging Local Experts

- What key tools do blacksmiths need?
- Local toolsmiths, really
- Occasionally, they’re doctors, dentists

http://www.tfsr.org/
http://www.ifad.org/gender/learning/sector/agriculture/71.htm
http://www.atalink.co.uk/bdhf/html/p081.htm
www.woodsfordps.supanet.com/CamTFSR/cambridge_tfsr_page2.htm
Culture: Aesthetic & Natural Resources

- China’s parks & walls
- Jordan’s ancient ruins
- Etc!
- How profit?

abe.www.ecn.purdue.edu/~agenhtml/agenmc/china/scengw.html
Distributed Power: Solar

- Evergreen Solar
  http://www.evergreensolar.com/
- Selco – India, Sri Lanka, Vietnam…
  http://www.selco-intl.com/
Distributed Power: Enhanced Photosynthesis

- Thin film techniques
- Ultra-efficient greenhouses?
- Power roofs?

http://web.mit.edu/chemistry/dgn/www/
Distributed Power: No Electricity AC & Refrigeration

• Natural Cooling techniques, packaged well

http://www.sristi.org/naturalwatercooler.html
http://www.humboldt.edu/~ccat/renewableEnergyFiles/naturalrefrig.html
Distributed Power: Battery Charging

- Vendergy
  http://www.media.mit.edu/~saul/vendergy/vendergy.html

- Labor Intense alternative methods?

http://www.thesustainablevillage.com/batteryshop.html
Infocom: Low Cost Wireless

- Sensors
- Radio data links

http://www.media.mit.edu/~tagdata/
http://www.media.mit.edu/~fletcher/
Infocom: Universal Translator

• Reduce misunderstandings
• Increase flow of trade
• Teaching tool

http://www.zdnet.com/computershopper/edit/cshopper/content/9806/309164.html
http://www.via-pc.com/
Infocom: Printed Electronics

- Printed PCs?
- Printed PDAs?
- Electronic Ink applications

http://www.media.mit.edu/molecular/projects.html
http://www.eink.com/
Education: Open CourseWare / Distance Learning

• Bringing MIT to the world instead of the world to MIT
• Generalizing
• Talent identification

http://web.mit.edu/afs/athena/org/o/ocw/
Education: Other Parallels to IITs

• Many Indian IIT Alum Entrepreneurs in US:
  – Junglee, Firefly, Hotmail

• Global Bigshot Alums:
  – Gupta, Khosla, Dalal

How about an African IT system? Latin IT system?

Education: Global Talent Agency

- Recruit for franchise organizations
- Training, Human Capital
- Multi-nationals

- Fears of “Brain Drain”
- Instead a “Brain Rotation”

http://news.bbc.co.uk/hi/english/health/newsid_1292000/1292413.stm
http://rbd.nstda.or.th/
Education:

- One Page cartoons showing creative kids “How To” build things
- Open Source & Copylefted
- Target audience: 1 Billion Kids worldwide

http://www.howtoons.org
Business Models: MicroFranchising

- Pharmacies
- Battery recharge stations
- Phone usage
- Email kiosks & cafes
Business Models: Multinational Action

- Coca Cola in 200 countries
- Training for business
- Keeping in mind the Global Compact

http://www.unglobalcompact.org/
Business Models & Finance: Securitization & Privatization

• Increased tendency to de-nationalize assets
• Vouchers
• Myriad models for privatizing part, most, or all of an asset
• Role of securitization

www.cdcconv.com/asacongress/srilankan.htm

http://www.eia.doe.gov/emeu/pgem/ch4a.html
Finance: MicroCredit, MicroFinance, MicroVC

- Credit = loans and lines of credit, debt
- Finance = more general financial services
- VC = risk capital, equity
- Monetizing Social Capital

http://www.accion.org/main.asp
http://www.endeavor.org/
http://www.grameen.org
http://www.uncdf.org/sum/
...
Finance: Expat Ventures

• NextVC
  – Sri Lankan VC
  – Investments in US-based expats with back-home operations

• E.g. Laksoft
  http://www.laksoft.com

www.bbc.co.uk/.../2001/03/13/sri_lanka/sri_lanka.shtml

Finance: Farmer Futures

- Coop-based risk mitigation
- Market mechanisms to bound market risks
  - e.g. futures for coffee growers
- Guarantee price floors, hedge exposure

- From ’83 to ’98 prices flux from 50% below to 150% above avg.

How not to come a cropper

Small farmers are at the mercy of rich countries’ commodity markets. But help is at hand, says Andrew Bounds

Published: October 11 2001 19:30 | http://www.ft.com
http://globalarchive.ft.com/globalarchive/article.html?id=011012001180&query=futures+farmer+coffee
Finance: Trustworthy Remittance Network

• “Family Capital”
• Mexican family remittances said to be larger than FDI
• Transaction costs ~15-20%
• US to Latin America estimated at >$20Billion

http://news.ft.com/ft/gx/cgi/ftc?pagename=View&c=Article&cid=FT3B4GVATMC

InterAmerican Development Bank Conference
http://www.iadb.org/mif/eng/conferences/remit_en.htm
Finance: Formalization of Informal Economy

- Formalizing the informal sector
- E.g. factories, taxibus, etc
- Reducing red tape
- Turnkey business formation?

http://www.ild.org.pe/
http://www.economictimes.com/280401/28edit04.htm
Finance: Titleization

• Title to otherwise “Dead Capital”
• Technology and registry techniques?  
  http://www.basicbooks.com/fall00/016146/

Finance: Percapitization

• Broad share distribution & ownership by citizens in asset, e.g. REIT
• Vouchers done right
• Financial incentives for education, savings, e.g. Singtel